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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/721,053	11/22/2000	Steve Epstein	81183	2297
24628	7590	01/13/2005	EXAMINER	
WELSH & KATZ, LTD 120 S RIVERSIDE PLAZA 22ND FLOOR CHICAGO, IL 60606			NORRIS, TREMAYNE M	
			ART UNIT	PAPER NUMBER
			2137	

DATE MAILED: 01/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application N .

09/721,053

Applicant(s)

EPSTEIN ET AL.

Examiner

Tremayne M. Norris

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 July 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 and 8-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 8-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1,2,4,5,8-10,12-18,20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shimomura et al (US pat 6,473,858), and further in view of Fijolek et al (US pat 6,553,568).

Regarding claim 1, Shimomura teaches a communication session management method for providing a transmission service having a plurality of service-levels, each service-level being associated with a separate quality-of-service (QOS), the method comprising:

preparing data for transmission at one of the plurality of service-levels by uniquely associating a service-level encryption key with said one of the plurality of service-levels;

encrypting said data with said service-level encryption key to form encrypted data uniquely associated with said one of the plurality of service-levels; and

transmitting said encrypted data uniquely associated with said one of the plurality of service-levels to users entitled to said one of the plurality of service levels (col.6 lines 31-44; col.8 lines 18-25; col.13 lines 31-37).

Shimomura does not teach determining that communication load at said one of the plurality of service-levels exceeds a threshold; and downgrading to an available service-level that is lower in the QOS hierarchy than said one of the plurality of service-levels, wherein said downgrading step is supported in one of the following modes: an automatic mode; and a mode in which downgrade is made upon confirmation of a user.

Fijolek et al, however, teach determining that communication load at said one of the plurality of service-levels exceeds a threshold (col.26 lines 15-30); and downgrading to an available service-level that is lower in the QOS hierarchy than said one of the plurality of service-levels (col.27 lines 44-59; col.28 lines 22-41, wherein said downgrading step is supported in one of the following modes: an automatic mode; and a mode in which downgrade is made upon confirmation of a user (col.27 lines 39-39: automatically downgrading, or "dynamically adjusting" service level when transmission rate exceeds a maximum data transmission rate).

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine Shimomura et al's apparatus for broadcasting data with access control with Fijolek et al's teaching of downgrading to a lower service level in order to allow service level agreements to be used without adversely affecting performance or throughput (Fijolek col.28 lines 50-53).

Regarding claim 2, Shimomura and Fijolek in combination teach the method of claim 1, in addition Shimomura teaches distributing to the users entitled to said one of the plurality of service levels decryption key derivation information for decrypting said encrypted data (col.6 lines 31-44; col.13 lines 31-37).

Regarding claim 4, Shimomura and Fijolek in combination teach the method of claim 1, in addition Shimomura teaches said plurality of service levels are hierarchical according to a QOS hierarchy (col.7 lines 25-43).

Regarding claim 5, Shimomura and Fijolek in combination teach the method of claim 4, in addition Shimomura teaches each one of the plurality of service-levels includes an indication of at least one of the following: a data transmission bandwidth; a number of users that may concurrently connect to the transmission service, a set of transmission applications served; a type of downgrade support to a service-level lower In the QOS hierarchy; a type of disconnect-on-idle operation; and a determination of a Web server to connect to (col.8 lines 18-25).

Regarding claim 8, Shimomura and Fijolek in combination teach the method of claim 1, in addition Fijolek teaches identifying the available service-level that is lower in the QOS hierarchy than said one of the plurality of service-levels (col.26 lines 15-30; col.27 lines 44-49). In addition, Shimomura teaches encrypting said data with an

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encryption key uniquely associated with said available service-level that is lower in the QOS hierarchy than said one of the plurality of service-levels to form encrypted data uniquely associated with said service-level that is lower in the QOS hierarchy (col.6 lines 31-44; col.7 lines 25-43; col.8 lines 18-25); and transmitting, said encrypted data uniquely associated with said service level that is lower in the QOS hierarchy to users entitled to said one of the plurality of service-levels (col.6 lines 4-14).

Regarding claim 9, Shimomura and Fijolek in combination teach the method of claim 1, in addition Shimomura teaches the transmission service comprises at least one of the following: a unicast transmission; and a multicast transmission (col.4 lines 18-27).

Regarding claim 10, Shimomura and Fijolek in combination teach the method of claim 1, in addition Shimomura teaches said users comprise at least one of the following: individual users; and users of an Intranet (col.17 lines 42-51).

Regarding claim 12, Shimomura and Fijolek in combination teach the method of claim 1, in addition Shimomura teaches enabling the users entitled to said one of the plurality of service-levels to decrypt said encrypted data according to service-level entitlements of the users (col.6 lines 4-15; col.6 lines 31-44; col.6 lines 54-61).

Regarding claim 13, Shimomura and Fijolek in combination teach the method of claim 1, in addition Shimomura teaches said data comprises at least one of the

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following: any type of computerized data; video information; audio information; and multimedia (col.3 line 65 thru col.4 line 5).

Regarding claim 14, Shimomura and Fijolek in combination teach the method of claim 13, in addition Shimomura teaches said data comprises on demand data (col.19 line 32 thru col.20 line 40).

System claims 15-18 are substantially equivalent to method claims 1,13,14 and 5 respectively, therefore claims 15-18 are rejected for the same reasons.

Regarding claim 20, Shimomura teaches teaches a communication session management method for providing a transmission service having a plurality of service-levels, each service-level being associated with a separate quality-of-service (QOS), the method comprising:

preparing data for transmission at one of the plurality of service-levels by uniquely associating a service-level encryption key with said one of the plurality of service-levels;

encrypting said data with said service-level encryption key to form encrypted data uniquely associated with said one of the plurality of service-levels; and

transmitting said encrypted data uniquely associated with said one of the plurality of service-levels to users entitled to said one of the plurality of service levels (col.6 lines 31-44; col.8 lines 18-25; col.13 lines 31-37).

What Fijolek teaches that Shimomura does not teach is said plurality of service-levels are hierarchical according to a QOS hierarchy, and each one of the plurality of service-levels includes an indication of at least one of the following: a number of users that may concurrently connect to the transmission service, a set of transmission applications served; a type of downgrade support to a service-level lower in the QOS hierarchy; a type of disconnect-on-idle operation; and a determination of a Web server to connect to (col.22 lines 9-20). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine Shimomura et al's apparatus for broadcasting data with access control with Fijolek et al's teaching of downgrading to a lower service level in order to allow service level agreements to be used without adversely affecting performance or throughput (Fijolek col.28 lines 50-53).

3. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shimomura and Fijolek in combination as applied to claim 2 above, and further in view of Maillard (US pat 6,393,562).

Regarding claim 3, Shimomura and Fijolek in combination teach the method of claim 2, but do not teach wherein said decryption key derivation information is comprised in an entitlement control message (ECM). Maillard teaches wherein said decryption key derivation information is comprised in an entitlement control message

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(ECM) (col.2 lines 42-57). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine Shimomura et al's apparatus for broadcasting data with access control, as modified by Fijolek, with Maillard's teaching of an entitlement control message in order to enable a user to decrypt a control word which would allow the user to decrypt the encrypted information (Maillard col.2 lines 49-57).

4. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shimomura and Fijolek, and further in view of Lampson et al (US pat 5,161,193).

Regarding claim 11, Shimomura and Fijolek in combination teach the method of claim 1, however, neither Shimomura nor Fijolek teach said encrypting step is performed in a PID layer. Lampson teaches said encrypting step is performed in a PID layer (col.20 lines 40-50). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine Shimomura's apparatus for broadcasting data with access control, as modified by Fijolek, with Lampson's pipelined cryptography processor in order to provide a system having increased speed and efficiency of cryptographic processing, while retaining the option to process normally any information packets that are not encrypted (Lampson col.7 lines 13-27).

5. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shimomura, and further in view of Lampson et al (US pat 5,161,193).

Regarding claim 19, Shimomura teaches a communication session management method for providing a transmission service having a plurality of service-levels, each service-level being associated with a separate quality-of-service (QOS), the method comprising:

preparing data for transmission at one of the plurality of service-levels by uniquely associating a service-level encryption key with said one of the plurality of service-levels;

encrypting said data with said service-level encryption key to form encrypted data uniquely associated with said one of the plurality of service-levels; and

transmitting said encrypted data uniquely associated with said one of the plurality of service-levels to users entitled to said one of the plurality of service levels (col.6 lines 31-44; col.8 lines 18-25; col.13 lines 31-37).

Shimomura does not teach said encrypting step is performed in a PID layer. Lampson teaches said encrypting step is performed in a PID layer (col.20 lines 40-50). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine Shimomura's apparatus for broadcasting data with access control with Lampson's pipelined cryptography processor in order to provide a system having increased speed and efficiency of cryptographic processing, while retaining the option to

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process normally any information packets that are not encrypted (Lampson col.7 lines 13-27).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tremayne M. Norris whose telephone number is (571) 272-3874. The examiner can normally be reached on M-F 7:30AM-5:00PM alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Caldwell can be reached on (571) 272-3868. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tremayne Norris

January 7, 2004



**ANDREW CALDWELL
SUPERVISORY PATENT EXAMINER**